

1 1. A method of multicast routing, comprising:  
2 receiving link state advertisements from routers in  
3 a network; and  
4 constructing a multicast routing table from the  
5 received link state packets, the table corresponding to a  
6 short path tree through multicast routers.

1 2. The method of claim 1 further comprising  
2 performing reverse path forwarding using the multicast  
3 routing table.

1 3. The method of claim 1 wherein the link state  
2 advertisements comprise OSPF (Open Short Path First) link  
3 state advertisements.

1 4. The method of claim 1 wherein the link state  
2 advertisements comprise MOSPF (Multicast Open Short Path  
3 First) link state advertisements.

1 5. The method of claim 1 wherein constructing the  
2 multicast routing table comprises determining if a router is  
3 a multicast router.

1 6. The method of claim 1 wherein constructing the  
2 multicast routing table comprises using Dijkstra's short  
3 path algorithm.

1 7. The method of claim 1 wherein the multicast  
2 routing table correlates addresses of destination multicast  
3 capable routers with addresses of multicast capable routers  
4 on a short path tree of multicast capable routers.

1           8. The method of claim 1 further comprising  
2 constructing a unicast routing table from the received link  
3 state advertisements.

1           9. The method of claim 1 wherein using the  
2 multicast routing table comprises configuring PIM (Protocol  
3 Independent Multicasting) to use the multicast routing  
4 table.

1           10. The method of claim 9 wherein configuring  
2 comprises providing a routine for a PIM RPF\_Check function.

1           11. The method of claim 8 wherein PIM uses the  
2 multicast routing table to perform reverse path forwarding  
3 in sparse mode.

1           12. The method of claim 8 wherein PIM uses the  
2 multicast routing table to perform reverse path forwarding  
3 in dense mode.

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1           13. A method of multicast routing, comprising:  
2 receiving MOSPF (Multicast Open Short Path First)  
3 link state advertisements from routers in a network;  
4 constructing a multicast routing table from the  
5 received link state packets, the multicast routing table  
6 correlating addresses of destination multicast capable  
7 routers with addresses of multicast capable routers on a  
8 short path tree of multicast capable routers; and  
9 performing reverse path forwarding using the  
10 multicast routing table.

1           14. The method of claim 13 further comprising  
2 constructing a unicast routing table from the received link  
3 state advertisements.

1           15. The method of claim 13 further comprising  
2 receiving OSPF (Open Short Path First) link state  
3 advertisements.

1           16. The method of claim 13 wherein multicast  
2 routing comprising routing in accordance with the Protocol  
3 Independent Multicasting (PIM) protocol.

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1           17. A computer program product, disposed on a  
2 computer readable medium, for multicast routing, the  
3 computer program including instructions for causing a  
4 computer to:  
5           receive link state advertisements from routers in a  
6 network;  
7           construct a multicast routing table from the  
8 received link state packets, the table corresponding to a  
9 short path tree through multicast routers.

1           18. The computer program of claim 17 further  
2 comprising instructions for performing reverse path  
3 forwarding using the multicast routing table.

1           19. The computer program of claim 17 wherein the  
2 link state advertisements comprise MOSPF (Multicast Open  
3 Short Path First) link state advertisements.

1           20. The computer program of claim 17 wherein the  
2 multicast routing table correlates addresses of destination  
3 multicast capable routers with addresses of multicast

4 capable routers on a short path tree of multicast capable  
routers.

1 21. The computer program of claim 17 further  
2 comprising instructions for constructing a unicast routing  
3 table from the received link state advertisements.

1 22. The computer program of claim 17 wherein  
2 multicast routing comprises multicast routing using the  
3 Protocol Independent Multicasting (PIM) protocol.

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